GEOGRAPHIC NEWS BULLETIN

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HOW TO OBTAIN THE BULLETIN

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Simbirsk, Russia's St. Louis, Lenin's Birthplace

SIMBIRSK, Russia, which is to be the site of an American memorial school, may be unknown to American ears, but in the land of the Great Bear it is now revered as the birthplace of Lenin, who for five years guided the destinies of Soviet Russia.

The city, Simbirsk, rides like saddlebags on the spine of a hill that rears its back between two rivers, only a few miles apart, flowing in opposite directions.

One is the shallow Sviyaga, the other the matronly Volga, the Mississippi of Russia. In its commerce today, and because it was a frontier city when the Tatars were the Red Indians of Russia, Simbirsk is a miniature St. Louis.

A Fortress Marking the Tatar Dead Line

History's effect on geography is apparent in the location on the western Volga bank of every important city from Simbirsk to the Volga's multi-channel mouth, below Astrakhan. Syzran, Saratov, Kamishin and Tsaritsin bear witness of the last stand of the barbarian hordes, Kazan, once the tented city of the Tatars, and the venerable Nizhni Novgorod, famed for fairs, still farther up the Volga, were the frontier cities which Ivan the Terrible wrested from the enemy and held against their blows, fortunately futile, to regain both banks of the Volga.

Simbirsk is the first important city above the great loop of the Volga, at Samara. It is the chief city of the government of the same name. In it live the Mordvinians, among the most interesting aboriginal Russians, whose women are conspicious for their embroidered dresses, earrings made of rodents' tails, and necklaces by the scores which make of each wearer's bosom a veritable museum of ornaments.

Mix Christianity With Surviving Pagan Forms

Nominally accepting the Christian religion they weave into it their pagan customs, almost deify the honey bee, still go through the form of kidnapping brides, and have a ritual of the resurrection of the dead which is especially interesting. On the fortieth day after death the spirit of the dead is supposed to return to the home of his relatives; one of the family undertakes to be his mouthpiece and speaks in his name.

In many homes of Simbirsk the traveler will find an altar of stone covering a pit dug to receive the blood of slaughtered sacrificial animals. In the more primitive communities young girls have been reported killed for such offerings.

Bee Keeping Taught in Schools

The bee is in evidence in Mordvin literature and lore; to this day the province might well account itself a land of milk and honey. Grain is its agricultural mainstay but the importance of bee keeping was reflected in the pre-war educational system by the course in that subject taught in fifty schools in the government. Most schools had gardens and many had farms.

Irregular river courses, irregular hills, and irregular climate mark this eastern

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A CHICLE (CHEWING-GUM) CAMP IN A CLEARING IN THE FORESTS OF PETEN, GUATEMALA.

These camps are located near aguadas, or water-holes, and are sometimes of a fairly permanent nature. The houses have palm-leaf thatched roofs and sides of boughs, and are thoroughly waterproof. A pile of chicle bales is seen in the foreground, each weighing from 100 to 150 pounds and being about the size of a large block of ice. The Carnegie Expedition's mule train has just arrived at this camp. Retiring in these forests is no light task, involving, as it does, the arrangement of an elaborate mosquito-netting and a search for stray insects with an electric torch before the process is complete. (See Bulletin No. 2.)

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Chewing Gum Guide to Maya Ruins

WHO WERE the Mayas?

How the chewing gum habit stimulated the finding of important Maya ruins is a bizarre chapter in their story.

Expeditions to find more about this pre-Columbian people arouse keener interest in them. They are credited with the "foremost intellectual achievement of ancient America" and they have been called "The Greeks of the New World."

Most Brilliant Expression of Ancient Americans

Sylvanus Griswold Morley, writing to the National Geographic Society, says of the Mayas:

"During the first millennium before Christ, while yet our own forebears of northern Europe were plunged in the depths of barbarism, there developed somewhere in Middle America, probably on the Gulf Coast of southern Mexico, a great aboriginal civilization called the Maya, which was destined to become the most brilliant expression of the ancient American mind.

"Their priests and astronomers were gathering from the stars the secrets of time and its accurate measure, the revolutions of the moon and planets.

"Their mathematicians and chronologists devised a calendar and chronology which were without peer on this continent and excelled by none in the Old World at that time.

"Their builders developed an architecture at once unique, dignified, and beautiful.

"Their sculptors carved the most elaborate compositions and designs in stone.

"Their leaders mastered the problems of social and governmental organization and administered the state adequately and well. In short, a great national life was quickening to its fullest expression.

Developed Writing System by Hieroglyphics

"The zenith of their civilization, however—indeed, the intellectual climax of all civilizations—was the development of a hieroglyphic writing which, moreover, was the only system of writing in the New World worthy of comparison with the earlier graphic systems of the Old World, such as those of Egypt, of Babylonia, and of China, for example.

"Buried in the vast tropical forests of northern Central America, and especially in the State of Guatemala, these splendid memorials of a forgotten people are slowly coming to light.

"Year after year expeditions sent out by American scientific institutions are penetrating deeper and deeper into these virgin fastnesses and are discovering new ruined cities.

The Lure of Chicle Breaks Trails to Ruins

"The only other business which brings man into these tropical forests of northern Guatemala is one of our most important American industries, what might be termed, perhaps, our national sport—chewing gum.

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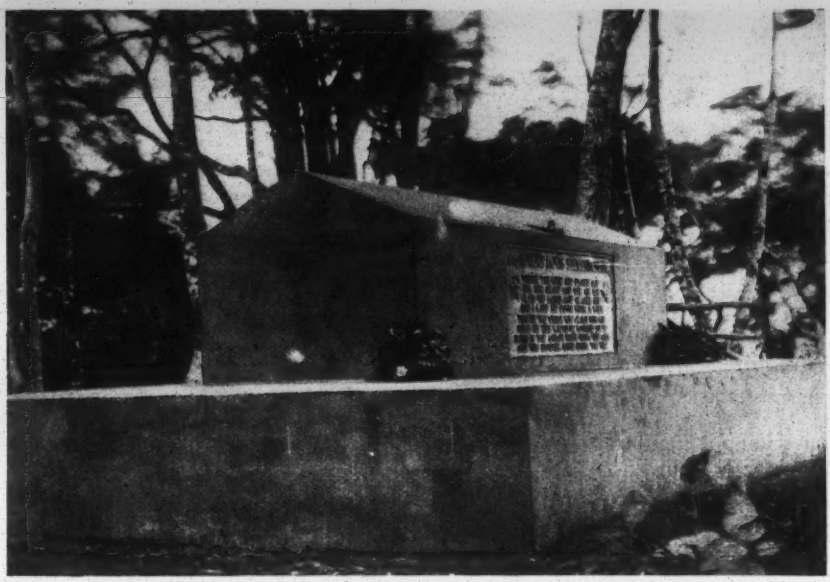
sector of Russia's great central plateau. In the city of Simbirsk the extreme range within one year was from 115 degrees above to 48 degrees below zero. Fertility of the soil often succumbs to adverse weather and famine follows.

This province was one where the communal farming caused no shock; for peasant villages already held, as community tracts, more than 40 per cent of the land.

Chaliapin Also Son of the Volga

Like Lenin, Chaliapin, probably the world's greatest living basso, was born on the banks of the famous Volga. The story of his rise to fame is closely associated with this river. He earned great local fame in his youth by calling out with such great strength that his voice could be heard across the broad stream. A wealthy tourist from Petrograd chanced to witness this most unusual exhibition, and promised to pay his way if he would come to the capital and study music. Training soon proved that he could sing as well as shout. As an artist his fame traveled before him to America but the welcome he received in the United States has been no less enthusiastic than the greeting each succeeding season. "The Volga Boat Song," now well known in America, was introduced here by this son of the Volga. In this impressive chant is heard the sweep of oars of the laboring oarsmen on the river boats and it is not hard to imagine a closing twilight on the broad breast of the Volga with the slow beat of this boat song floating over the waters as the boatmen bring loads of wheat into Simbirsk.

Bulletin No. 1, March 17, 1924.



THE GRAVE OF ROBERT LOUIS STEVENSON ON OPOLU, SAMOAN ISLANDS.

On the summit of Mount Vaea a cemented monument, in accordance with native design has been erected by native labor over the grave of Robert Louis Stevenson. On the side facing the east are carved his own words:

"Under the wide and starry sky,
Dig the grave and let me lie,
Glad did I live and gladly die,
And I laid me down with a will.

"This be the verse you grave for me:
Here he lies where he longed to be;
Home is the sailor, home from sea,
And the hunter home from the hill."

Chiseled on the tomb are a thistle and a hibiscus flower, typical of his countries. (See Bulletin No. 3.)

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Fiji Islands May Become Canada's Hawaii

FIJI wants Canada; will Canada have Fiji? That will be the question before the foreign office at Ottawa if the movement on the famous cannibal islands to join Canada as Hawaii joined the United States develops to its logical end.

Terrors of Fiji's fierce savages, a name to chasten children, have given way before the nameless dreamy charm which now wraps the islands of the South Pacific.

Cannibalism Now Only a Memory

Though old men still live who confess knowledge of the taste of cooked human flesh, they, like their sons and daughters, have become good abiding Christians. Today, their tempers are as equable as the climate of this twentieth century Eden.

The Fiji group is about 600 miles from Samoa, where the United States has a station, Tutuila. Fiji proudly claims the world's unique self-regulating climate. A thermostat on a modern heating plant could do no more. When it is hot the corrective comes automatically. Heat brings coolness from the mountains. Dryness brings rain. Stillness even brings the breeze, a Fiji enthusiast avers. Protecting nature has even gone so far as to build coral-dikes against angry waves almost completely around the main island, Viti Levu. Extremes of temperature are 59 degrees and 94 degrees.

Find Good in Hurricanes

But every Eden has its serpent which, in Fiji's existence, takes the form of a hurricane. These disturbances are affectionately known as "blows."

Hurricanes cannot jar the mental serenity of Fiji residents, one of whom claims "blows" are not an unmixed evil, maintaining that: "they stir things up. They prune the trees of fruit and leaves and give their fecundity a rest, so that they bear better afterwards. They loosen the soil around the roots. They dig about them, as it were, and even blow moths and other insect pests out into the ocean!"

Natives Are Disciples of Rip Van Winkle

Of the three main racial groups of the population numbering 157,266, the native Fijians are still dominant, totaling 84,475; but their predominance is fading fast. In 1921 there were 60,634 East Indians and 3,878 Europeans. Natives of India were imported for labor because the Fijians themselves are too ardent disciples of Rip Van Winkle; and the Indians have multiplied rapidly. With happy resignation the Fiji natives believe that the world is made for leisure and not for work and worry. The story told by birth and death statistics is very similar to our American Indian's position for many years; Fiji birth rate, 31.96, death rate, 27.61; Indians (from India) birth rate, 38.00, death rate, 7.5.

Although Fijians, less than 40 years ago, killed, cooked and ate two men to celebrate the establishment of a new school, this South Sea Eden is tamed now. So easily is law maintained that criminals can be seen sobbing in the doorway of Suva's jail because they are shut out! As the hour of six approaches men will

"The principal ingredient of chewing gum is 'chicle,' which is obtained from a tree called the 'chico-sapote,' growing in these forests. Indeed, the archaeologist is deeply indebted to the chicle business for bringing him first news of new cities found in the bush from time to time by the chicle-hunters.

"A standing reward is offered to all chicleros for 'information leading to the capture, dead or alive,' of any new group of ruins where there are hieroglyphic monuments, and already this expedient has resulted in the discovery of several important cities.

"It is the chicle-operators who keep the trails open; who locate the waterholes for camping places; who maintain mule trains, the only means of transportation possible in the region; whose activities bring labor into the bush. In short, in this field, at least, the archaeologist could scarcely pursue his profession were it not for our popular pastime of chewing gum. But to return to our subject.

"The peculiar importance of the Maya hieroglyphic writing lies in the fact that it represents a stage in the science of expressing thoughts by graphic symbols not exemplified by the writing of any other people, ancient or modern. It stands at that momentous point in the development of the human race where graphic symbols representing sounds were just beginning to replace symbols representing ideas."

Bulletin No. 2, March 17, 1924.

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A BOAT ON THE VOLGA RIVER.

This is the type of river boat about which is woven the mystical entrancing Volga Boat Song, a chant of the oarsmen pulling the great sweeps against the sluggish current. (See Bulletin No. 1.)

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Measuring the Universe With an Atom

RECENTLY physics has conceived the atom to be a tiny "solar system." The question then arises: How big is an atom's universe, and how does it compare with our universe?

Making a model to give some little inkling of the size of our universe is not such an impossible task as might at first appear. It is merely a very special case of map-making.

Archimedes boasted that if he had a fulcrum and a long enough lever he could move the earth. Similarly the map-maker or the model-maker might say: "Give me a scale small enough and I can model our universe."

What Is a Universe?

There must be a clear understanding of terms, however. It is not *the* universe that can be built to scale. That, outside the Einstein school, is generally considered infinite in extent; and no matter how tiny the scale the infinite, of course, could never be brought within the limits of a model. But there is a definite thing that may be called *our* universe whose limits astronomers have estimated—the space marked out by the distance to the outermost star of the Milky Way.

Imagine this star to be a piece of chalk tied to a string, the other end pinned to the earth. Swing it about in every direction with the string taut, and you will mark out a great sphere of space believed to be 350,000 light years across. A light year is the distance that light travels in a year, moving at the rate of about 186,000 miles a second. It is the yardstick of modern astronomy. A light year is in round numbers six trillion miles, and the distance across our universe is taken as 350,000 times six trillion miles.

It must be understood that we are not assumed to be at the center of an actual globular universe. We have merely carved from space around us an imaginary, arbitrary globe in such a way that it includes practically all the stars that we can see, and have called it "our universe."

A Period and a Solar System

The dimensions of this universe—"our star system," is another name for it—when given in miles or light years mean little to most minds. Let us adopt the map-maker's plan and scale it down. Most maps have in one corner a legend such as, "scale: 1 inch equals 500 miles." Let us try for our universe model the scale, "the period at the end of this sentence equals 1 solar system."

On the motion picture screen many of us have seen represented a large disk which is made to decrease rapidly until it becomes a mere dot. Imagine the great solar system shinking in this way before our eyes until what was the path of Neptune, nearly three billion miles from the sun, is now the outer edge of the period.

Scale Too Large; the Universe Won't Fit a Period

If the globular "universe" that contains our star system shrank at the same time and in the same proportion, how big would it be when the solar system was

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come running from all points of the town to gain the jail with its food and bed before the doors are closed for the night, leaving them, figuratively, out in the cold.

Put on Trade Map By Panama Canal

Together the islands make up an area almost equal in size to the state of Massachusetts. Viti Levu, the largest, is mountainous, some peaks rising to 4,000 feet. Levu, capital and one of two towns in the group is on the south side of Viti Levu. To this small town have come the reverberations of a world event which bids fair to put Fiji on the map commercially. This was the opening of the Panama Canal. Before this event Fiji was as far off the world trade routes as Robinson Crusoe's isle. But now it is on the traveled path between England and her important possessions, Australia and New Zealand.

Shipping having given Fiji a reason for commercial existence, the islands have striven gallantly to produce sugar-cane, coffee, copra, cotton, rubber and cattle. The odds are against Fiji in two respects; native philosophy which insists that life is made for fun and frolic and the warm tropics which conspire to produce pests as generously as plants. In the tropics, it is said, there is no ointment without its fly; sugar-cane had its labor shortage, the banana its borer, coffee its leaf disease, cotton the capricious American market, and cocoanuts the hurricane. In spite of these obstacles Fiji's exports rose from $6,000,000 in 1919, to nearly $12,000,000 in 1921.

Alienated from New Zealand and Australia

Every man-made world development seems to have its commercial Ethiopian in the wood-pile. Back of Fiji's inclination for Canada is the fact that these South Sea Islands are developing a profitable trade with the Maple-leaf Dominion. On the face of things it would seem that Fiji might be better attached to New Zealand or Australia, its neighbors, but laws passed by these respective governments designed to monopolize Fiji trade have alienated the natural affections of the island's residents.

Native Fijians are a blending of the Polynesians, typically represented by the stalwart Hawaiians, and the kinky-haired Malay voyagers. They are a tall, magnificently built people of a color between coffee and bronze, with stiff, brush-like hair, trained into a high pompadour. Music is the soul of the people. They are often heard singing in their villages far into the night. Beauty of face and movement is more the rule than the exception and friendliness to strangers is carried almost to an excess.

Bulletin No. 3, March 17, 1924.

Form for Renewal of Bulletin Requests

Many requests for the Geographic News Bulletin were made for the year ending with this issue. If you desire the Bulletins continued kindly notify The Society promptly. The attached form may be used:

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Honduras and Its Railroadless Capital

HONDURAS is having an election and a revolution, or vice versa, and a recent dispatch reports that even the national band went over to the rebel side in a body. The United States Government, through the State Department, has informed the Honduran Government, that it views the disturbances with alarm and has sent a cruiser to hover off the coast.

If the United States, according to criticisms in 1791, selected a site for its capital far from the beaten path, Honduras selected one even more remote and inaccessible.

Tegucigalpa, capital of Honduras (a name which when properly pronounced brings to mind the "goosey-goosey-gander" of nursery rhymes), might have been termed until a few years ago the "Lhasa of the West," but not because it was a forbidden city by the edict of man. Its citizens have their share of the hospitality for which Latin America is noted; but Nature placed rough country between the city and the two oceans that bathe the shores of Honduras, and man did little to overcome the handicap. It is the only capital on the North American continent that has never echoed to the more or less musical blast of a railroad locomotive, and one of the few railroadless capitals in the Western Hemisphere.

Tegucigalpa is some 80 miles inland from its Pacific port, San Lorenzo, on highlands more than 3,000 feet above sea level. A road which was long no more than a trail, but which in late years has become a highway, connects the two points. Travelers who until recently must "do" the 80 miles in three days by muleback, their trunks following even more slowly by ox-cart, now ride to the capital by automobile. In the interior of the country, "with its flanks in the air," as a military man might describe it, is a fifty-mile highway in good condition extending between Tegucigalpa and the second most important town of Honduras, Comayagua. Over this road automobiles operate regularly.

Tegucigalpa is more than 100 miles from the Atlantic—or rather, the Caribbean Sea; but Americans can reach the capital more quickly from the Atlantic than from the Pacific side, due to the fast steamer service from New Orleans and Mobile. Puerto Cortez is the north shore port. From there a railroad extends for a short distance toward the interior, and from the rail head the journey by muleback to Tegucigalpa occupies five or six days.

The capital is generally as quiet a place as its inaccessibility would indicate. Its population is variously estimated at 20,000 to 37,000. Most of its buildings are of one story with walls of adobe or masonry and roofs of tile.

The government of the state adopted an ambitious rail-building program a generation ago, but financial ruin overtook the enterprise. In recent years a number of railroads have been built from the north coast by large banana companies, and some of these are being slowly extended toward the capital.

Honduras straddles the ridge pole of the Guatemala Andes, as the Central American cordillera sometimes is called. Along this range volcanoes go skyrocketing with disconcerting frequency. They wipe out cities, at times, as when Guatemala's capital was all but destroyed seven years ago, and San Salvador has won the nickname of "the swinging hammock." Yet volcanoes are the friends of these states. They are veritable gushers of elements which, entering into the soil, have made the vegetation luxuriant.

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the size of the little black punctuation dot? It would be represented by a globe nearly 12,000 miles across, a ball with a diameter half again as large as the earth! So our scale is far too great. If we are to have a workable model, the scale must be further reduced.

At the lower end of the world of matter the atom is built like a tiny solar system. Its size is known to science; and with its infinitesimal central "sun" and its planetary electrons, it makes a most appropriate measure for the circling planets and stars. The helium atom may be selected because it is the simplest atom that swims free, going about its business with no entangling alliances, like the solar system itself. The new scale, then, is to be "one helium atom equals one solar system."

Just how the helium atom mimics the solar system is worth noting. After many years of painstaking research, physicists are of the opinion that every atom consists of an infinitesimally small center, called a "proton" which stands in the place of the sun; and one or more tiny bits called "electrons" that revolve around the center more or less as the planets revolve around the sun. At the very bottom of the ladder is an atom consisting of a proton with one "planetary" electron. This is hydrogen, the simplest of the atoms. Hydrogen is not taken as our universe model scale because its atoms insist on "hooking themselves up" two by two, and also because only one planetary electron is involved. Helium, with two electrons flying around its proton, takes on a closer likeness to the solar system, and in addition each atom remains a thing apart as our planetary family does.

Atom's "Universe" Becomes 74 Feet Across

The diameter of a helium atom is something like one-forty-millionth of an inch; and if the solar system were scaled down to that size, our universe would be represented by a globe 74 feet through.

Even this does not show up the earth in all its unimportance. It must be remembered that the helium atom represents the whole solar system, the diameter of which is about 700,000 times as great as the diameter of the earth. In a 74-foot model of our universe the earth would be "represented" by a "dot"—if such a thing can be imagined—only one seven-hundred-thousandth as great an atom. The earth "dot" would be so small that in order to see it we would have to use a microscope more than a million times stronger than the most powerful one yet built. The "inhabitants" of such a tiny earth if they had reached heights of achievement comparable to ours, could reach out into space with their best telescopes just 74 feet. Everything more than 74 feet away would be unknown to them just as the vast reaches of space beyond the Milky Way are unknown to us.

Bananas Couriers of Civilization

The sagging side of the "tent" made by Guatemala's mountain ridge pole, slopes gently toward the Atlantic. Toward its edge are the lowlands which Cortez naively described as "covered with awfully miry swamps." Scattered tribes of primitive Indians and refugee negroes from the West Indies once eked out an isolated existence here. Now the region is blanketed with banana fields. This crop has bound the Caribbean side of Honduras to the United States by those invisible but enduring ties, steamship lines.

The constitution of Honduras does not regard the ballot as a privilege, but makes voting compulsory upon the male citizen who can read and write. If married he must begin voting at 18; if unmarried at 21.

Bulletin No. 5, March 17, 1924.

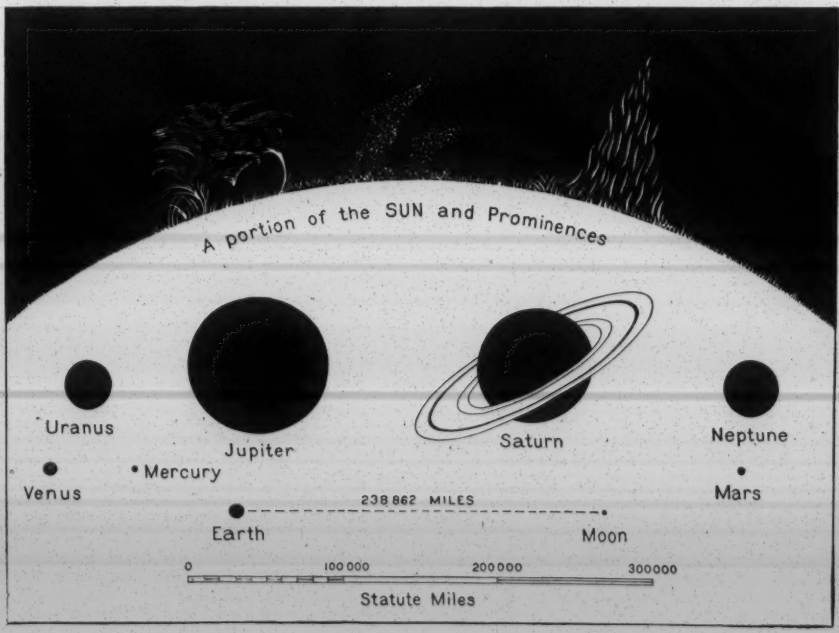

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CHART SHOWING THE RELATIVE SIZE OF THE SUN, MOON, AND MAJOR PLANETS.

The size of the sun in comparison with the several members of its planetary family is emphasized by the distance of the moon from the earth as here plotted on the face of the sun. The differences in their sizes play peculiar tricks of gravity. A hundred pounds would weigh 2,764 pounds on the sun, 252 pounds on Jupiter, 36 pounds on Mars, and 16 pounds on the moon. Spots on the face of the sun are often six times the diameter of the earth and prominences frequently reach so far into space that they would completely envelope our moon if they started from the earth. (See Bulletin No. 4.)